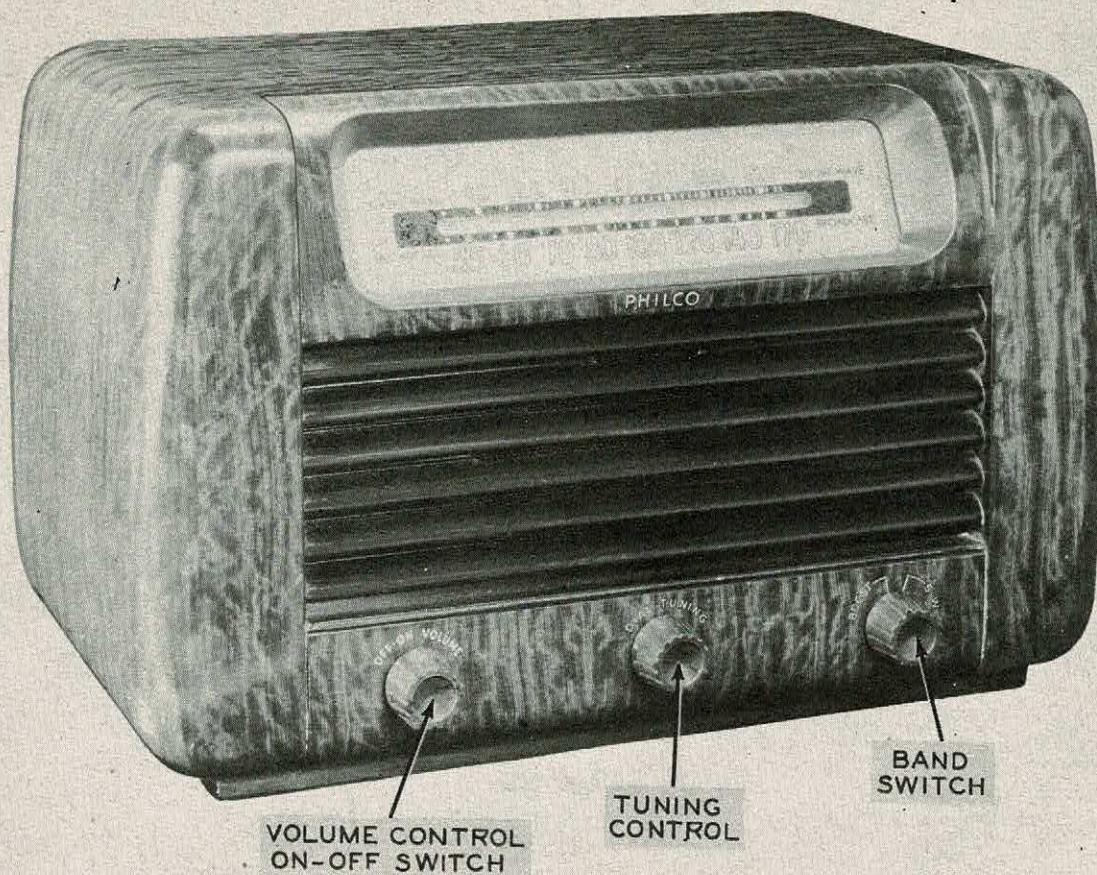


**PHILCO
MODEL 46-427**



PHILCO MODEL 46-427

TRADE NAME	Philco Model 46-427
MANUFACTURER	Philco Corp., Tioga & C Streets, Philadelphia, Pa.
TYPE SET	AC - DC 2 Band Superheterodyne - Self Contained Loop Antenna
TUBES (SIX)	Types 14AF7 Converter, 7B7 1st IF Amp., 7B7 2nd IF Amp., 7C6 2nd Det.-AVC-1st Audio, 50L6GT Power Output, 35Z5GT Rectifier.
POWER SUPPLY	115 Volts AC-DC Rating .245 Amp. @ 117 Volts AC
TUNING RANGE-BROADCAST	540-1720KC
	SHORT WAVE 9.0-15.5MC

ALIGNMENT INSTRUCTIONS

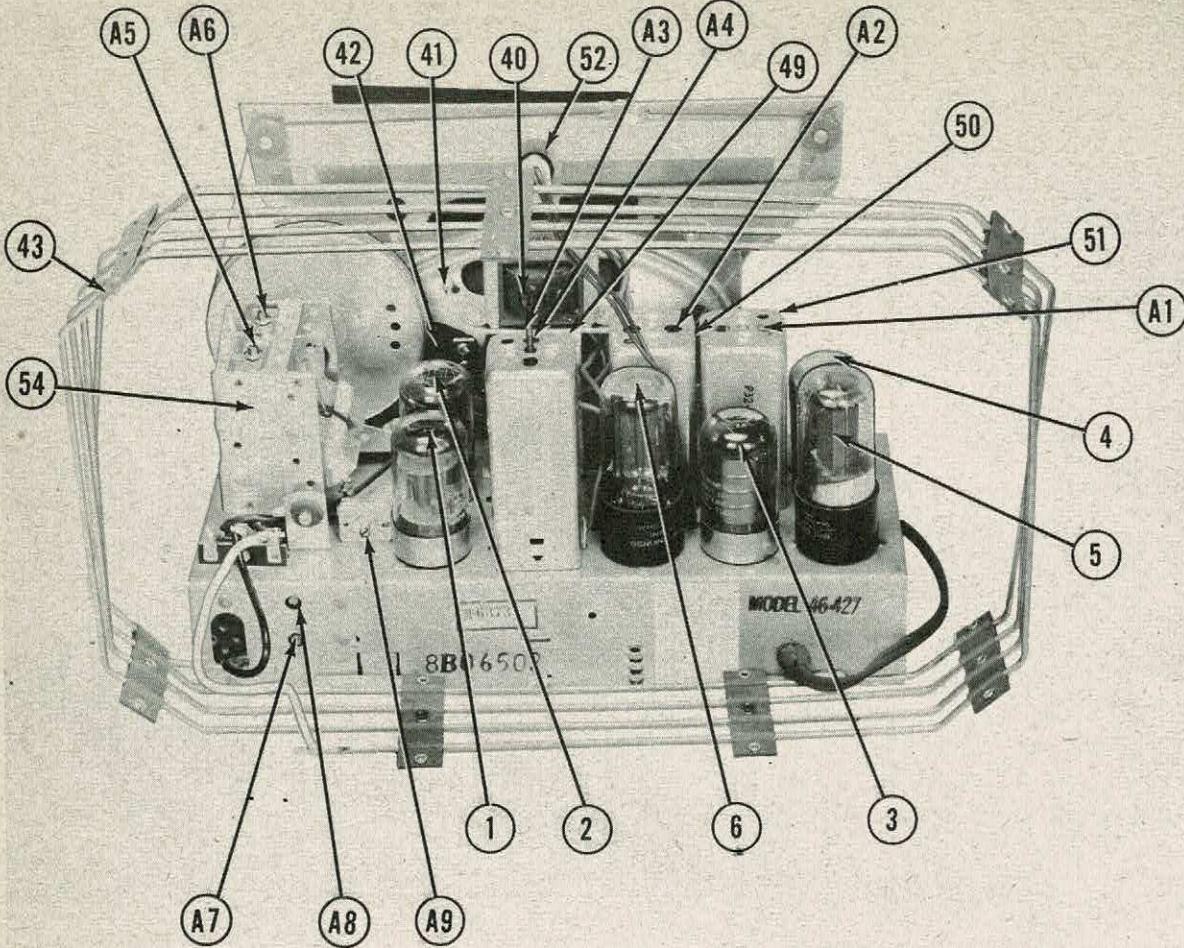
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
.05 MFD	High side to ant. stator section of tuning gang. Low side to B-.	455KC	BC	Low freq. end of dial.	Across voice coil Left and center lugs on terminal strip at rear of chassis.	A1, A2 A3, A4	Adjust for maximum output. Preset A4 by turning it down tight. Then adjust in order including A4. Use isolation transformer if available. If not, isolating capacitor must be connected between generator ground lead and receiver B-. Also decrease dummy to .001 MFD to prevent excessive hum modulation.
"	High side to ant. connection (right hand lug) on terminal strip at rear of chassis. Low side to B-.	1700KC	"	1700KC	"	A5	Preset A7 by turning it down tight and backing off 1/3 turn. Adjust A5 for maximum output. Use isolating instructions given for IF's.
"	"	1500KC	"	Tune to 1500 KC signal.	"	A6	Adjust for maximum output. Use isolation instructions.
"	"	600KC	"	Tune in 600 KC signal.	"	A7	Adjust for maximum output. Rock dial. Use isolation instructions.
"	"						Repeat adjustments on A5 and A6 in order and at frequencies given.
"	"	15MC	SW	15MC	"	A8, A9	Adjust for maximum output. Use isolation instructions.

Volume control at maximum and output from signal generator no higher than is necessary to obtain output reading. Use insulated alignment screwdriver for adjusting.

**PHILCO
MODEL 46-427**

PARTS LIST AND DESCRIPTIONS

CHASSIS—TOP VIEW



TUBES

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		PHILCO PART No.	STANDARD PART No.		
1	Converter	144F7/XXD	144F7/XXD	SAC	
2	1st IF Amp.	7B7	7B7	SV	
3	2nd IF Amp.	7B7	7B7	SW	
4	Det. AVC-IF	7C6	7C6	SW	
5	Output	50L6GT	50L6GT	7AC	
6	Rectifier	3535GT	3535GT	SAD	

ITEM No.	RATING	PHILCO PART No.	MALLORY PART No.	REPLACEMENT DATA		IDENTIFICATION CODES
				SOLAR PART No.	SPRAYGUE PART No.	
7 (A)	20	150	20-2541	2N509	DIN-2X20-150	PR6150-20-20(BRD2215)
(B)	.04	150	30-4119	TP425	S-6-04	TC-14 DT454
8	.04	400	30-4119	TP425	S-6-04	TC-14 DT454
9	.02	400	30-4589	TP423	S-4-02	TC-12 DT454
10	.02	400	30-4589	TP421	S-4-01	TC-11 DT454
11	.01	400	61-0120	TP421	S-4-01	TC-11 DT451
12	.01	400	61-0120	TP423	S-4-05	TC-15 DT451
13	.06	200	30-4518	TP426	S-4-02	TC-12 DT452
14 (A)	.02	400	76-1161	TP426	S-4-1	TC-1 DT451
(B)	.15	400	76-1161	TP417	S-4-1	TC-1 DT451
15	.05	200	30-4518	TP426	S-4-05	TC-15 DT451
16	.006	400	30-4504	TP408	S-6-006	TC-26 DT456
17	.01	400	61-0120	TP421	S-4-01	TC-11 DT451
18	.05	200	30-4518	TP426	S-4-05	TC-15 DT455
19	.05	400	TP426	S-4-05	TC-15 DT455	
20	250	500	6010245407	MC240	M0.5-325	IM-325 DT456
21	250	500	6010245407	MC240	M0.5-325	IM-325 DT457
22	50	600	6000515307	NC225	M0.5-45	IM-45 DT458
23	250	500	6010245407	MC240	M0.5-325	IM-325 DT459
24	6	500	6090505007	MC205	M0.5-55	MS-55 DT456
25	275	500	30-122-0			
26	275	500	30-122-0			

Used in Later Models
may be 300 MF in Some Models

CONTROLS

ITEM No.	RATING	PHILCO PART No.	MALLORY PART No.	REPLACEMENT DATA		INSTALLATION NOTES
				IRC PART No.	CLAROSTAT PART No.	
27 (A)	500Ω (B) Shaft (C) Switch	1	33-5458 Not Req. " " "	D13-133 A M26	H-602Z Not Req. SK-A	Volume Control Attach to 2A " per instructions " "

RESISTORS

ITEM No.	RATING	PHILCO PART No.	MALLORY PART No.	REPLACEMENT DATA		IDENTIFICATION CODES
				IRC PART No.	WATTS	
28	47KΩ	.2	63-34773540	EFTS-47K	.2	V1-V1-Or. Osc. Grid Red-Red-Red Converter Cathodes
29	22.00K	.1	66-22223340	EFTA-2200		Br-BLK-Or. AVC Network
30	2.2 Meg.	.1	66-52223340	EFTS-10K		Br-BLK-Or. Plate Load
31	10KΩ	.1	66-3103340	EFTS-1.5K		Br-Brn-Or. Screen Dropping
32	1.5KΩ	.1	66-3103340	EFTS-2.2		Br-Brn-Or. AVC Network
33	2.2 Meg.	.1	66-52223340	EFTS-4.7		Br-V1-Grn. 1st AF Grid
34	4.7 Meg.	.1	66-44773340	EFTS-470		Br-V1-V1-Grn. 1st AF Plate Load
35	470KΩ	.1	66-44773340	EFTS-470K		Br-V1-V1-Grn. Output Grid
36	13.0KΩ	.1	66-1133340	EFTS-130		Br-Or-Br-Yl. Output Cathode
37	12.0KΩ	.2	66-1133340	EFTS-120K		Br-Or-Br-Yl. Line Isolating +

*Not Used in all Models.

PARTS LIST AND DESCRIPTIONS

TRANSFORMER (OUTPUT)

REPLACEMENT DATA						INSTALLATION NOTES
ITEM No.	RATING		PHILCO PART No.	STANCOR PART No.	THORDARIN PART No.	
	IMPEDANCE PBL SEC.	DC RES. PBL SEC.				# bend one mounting tab under and solder to the original bracket.
4.0	2250Ω 2.6Ω	19Ω	Part of 36-1553	A-35976	T-13542#	

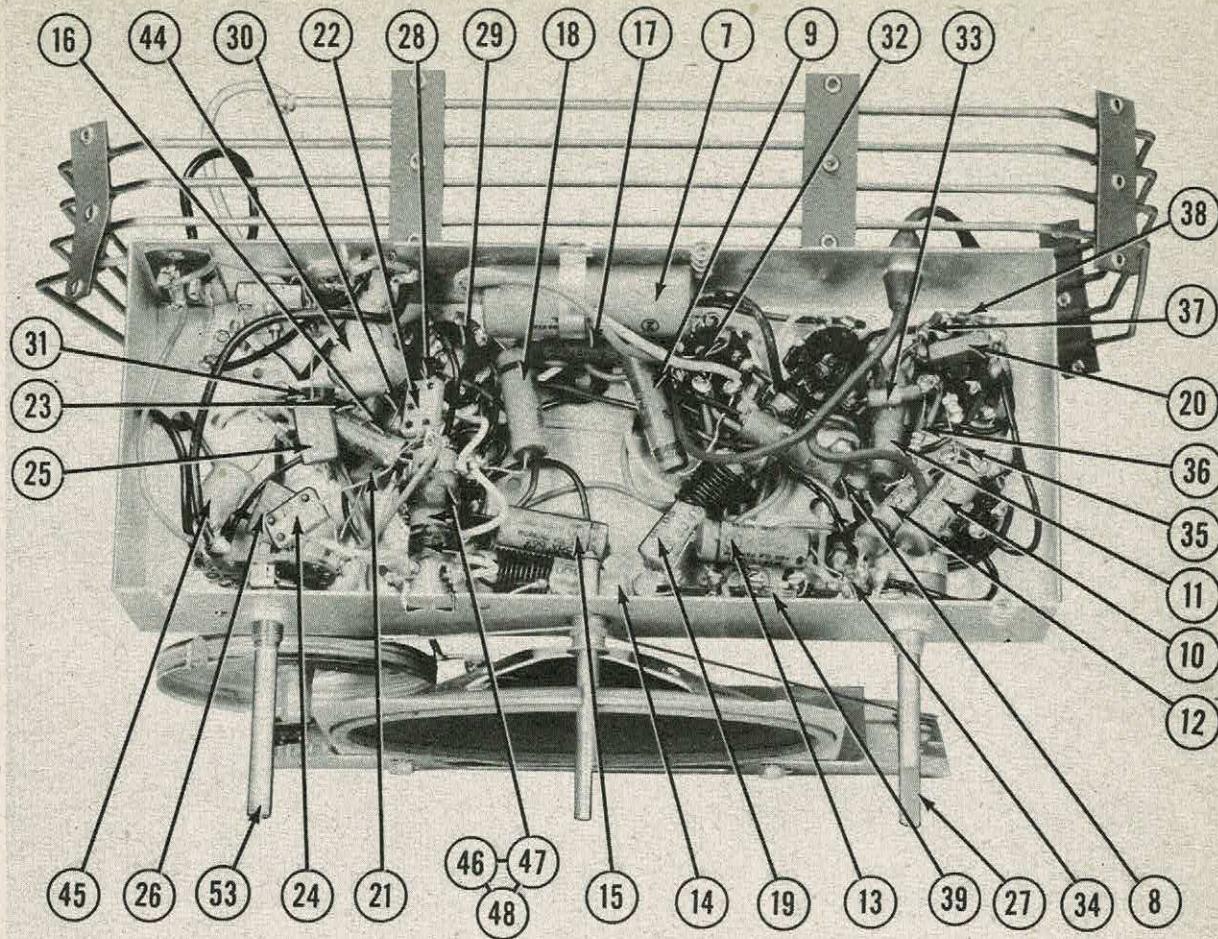
SPEAKER				REPLACEMENT DATA		INSTALLATION NOTES	
ITEM No.	RATINGS	PHILCO PART No.	JENSEN PART No.				
41	FIELD 500Z CONE DIA. 12"	VC IMP. 2.6Ω VC DIA.	36-1633 None	Some speakers will accept either cone or dome type drivers.	None	None	None
42							

ITEM No.	USE	DC RES. PR.	SEC.	REPLACEMENT DATA		INSTALLATION NOTES
				PHILCO PART No.	MESSENGER PART No.	
43	Loop Ant. Coil	.08		76-1279		
	BC Ant. Coil	.12		32-4008		
45	SW Art. Coil	.02		32-3716		
46	BC Osc. Coil	.62		32-3891		
47	SW Osc. Coil	.02				Part of 32-3991
48	Grid Coupl.					" "
	Coil	.82				
49	Input IF	.92		212		
50	Interstage IF	.92		222		
51	Output IF			See Installation notes		
				522		From diode to white lead 40.5KΩ - to blk. lead 650KΩ

MISCELLANEOUS

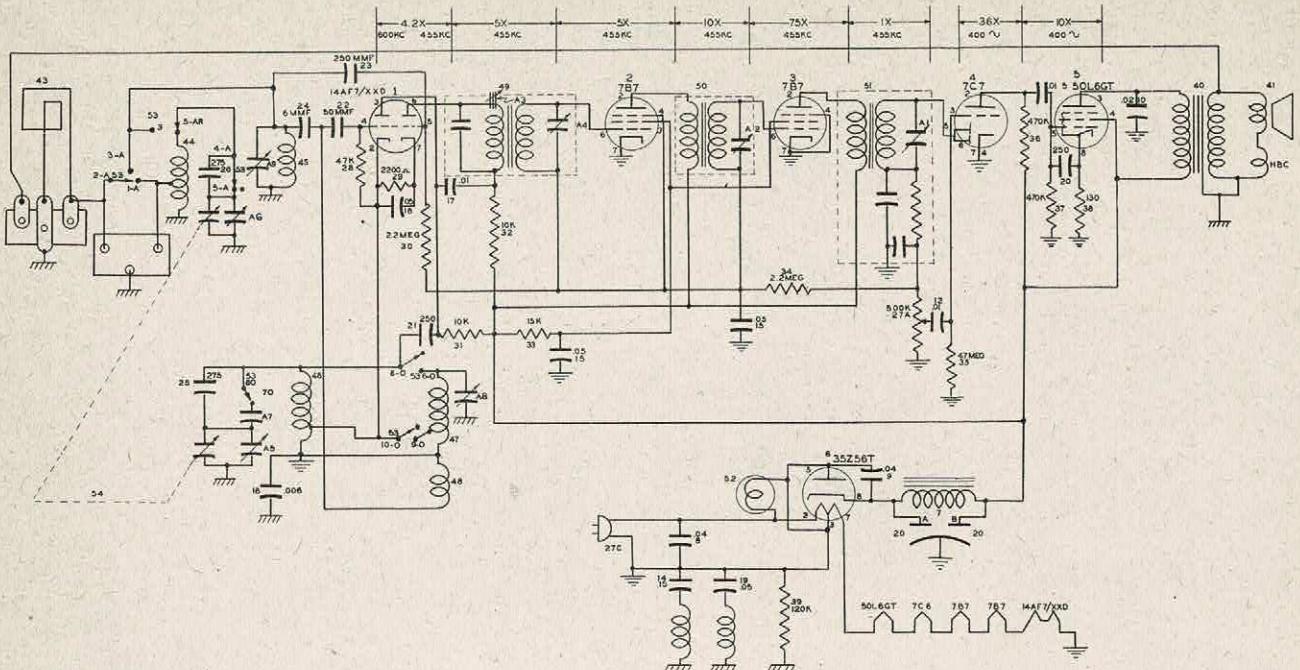
ITEM No.	PART NAME	PHILCO PART No.	NOTES
53	Barnd Switch	142-1772	2 Gang Variable Capacitor
54	Tuning Cap.	31-2555	Broadcast Osc.
A7	Trimmer	31-6453	Short Wave Osc. (Part of 31-6453 Ant.)
A8	"	31-6423	Scale
A9	Dial Assembly	27-5895	VOLUME, TUNING & BAND
	Cabinet	54-4311	WALNUT, PLASTIC COVERED WOOD
		10650	

CHASSIS-BOTTOM VIEW



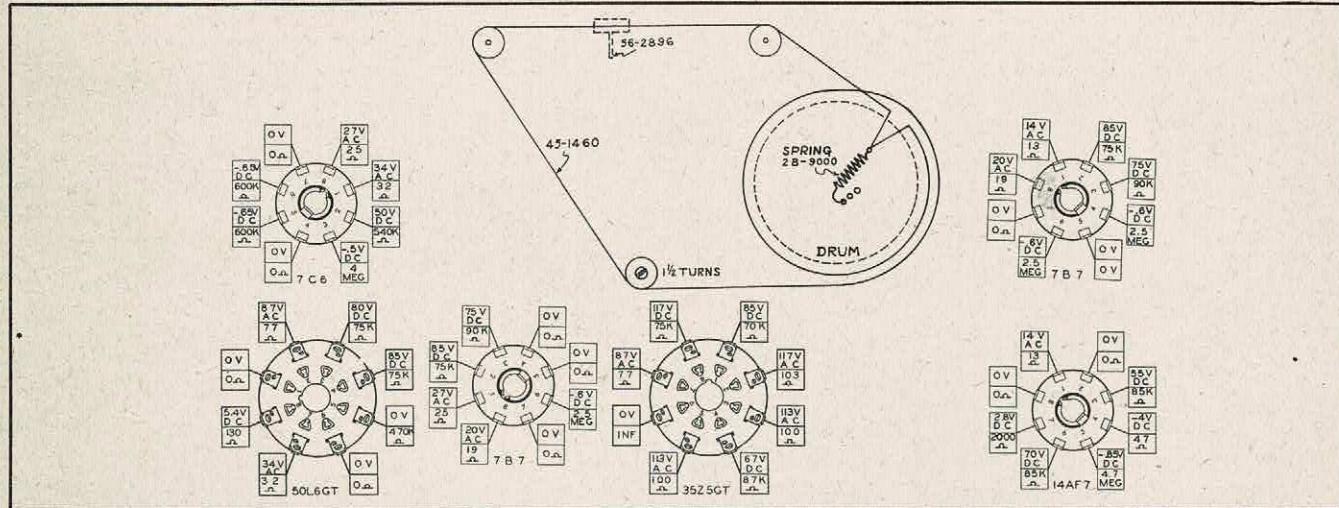
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SCHEMATIC DIAGRAM



The stage gain measured values listed above are approximate values for average operative stages, rather than absolute values. It should be borne in mind that it is possible to introduce so many variables into the measurement operation, such as, type of equipment used for measuring, handling and placement of probes, the accuracy of alignment, etc., that an absolute reading is impractical. AVC is made inoperative and 3 volt battery bias substituted for measurement.

VOLTAGE AND RESISTANCE ANALYSIS CHART



- DC voltage measurements are at 20,000 ohms per volt; AC voltages measured at 1,000 ohms per volt.
 - Socket connections are shown as bottom views.
 - Measured values are from socket pin to common negative.
 - Line voltage maintained at 117 volts for voltage readings.
 - Nominal tolerance on component values makes possible a variation of $\pm 10\%$ in voltage and resistance readings.
 - Volume control at maximum, no signal applied for voltage measurements.

HOWARD W. SAMS & CO., INC.

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